

CLAIMS

What is claimed is:

1. An apparatus that wraps silverware/flatware into a napkin and fastens the roll with an optional paper band that is plain or printed with any name, logo or advertising message.

2. An automated flatware and napkin assembling apparatus comprising:
a spoon hopper that holds stacked spoons prior to wrapping;
a fork hopper that holds stacked forks prior to wrapping;
a knife hopper that holds stacked knives prior to wrapping;
rolled paper napkins
rolled paper labels, perforated, with adhesive along one edge;
an exit slot, on which the fully wrapped and secured flatware exits the automated flatware and napkin assembling apparatus is provided at the bottom of the automation enclosure;

first upper indexing plate working in conjunction with a first lower indexing plate for providing for the dropping of one spoon and one fork at a time on a sliding chute defined by a first travel path and a second travel path;

a second upper indexing plate working in conjunction with a second lower indexing plate for the dropping of one knife at a time into the flatware trough as defined by a third travel path;

a napkin stream fed from said rolled paper napkins by a series of first indexing rollers working in a pinch roller arrangement;

a label stream fed from the rolled paper adhesive labels by a series of second indexing rollers working in a pinch roller arrangement;

5 wherein said first upper indexing plate, said first lower indexing plate, said second upper indexing plate, said second lower indexing plate, said first indexing rollers, and said second indexing rollers are all mechanically powered by a series of stepper motors activated by a logic controller that receives inputs from a series of sensors to direct the napkin stream into a flatware trough located at the
10 bottom of the sliding chute.

3. The automated flatware and napkin assembling apparatus of Claim 2, further comprising a series of automatically engaging jaws for grabbing the flatware bundle and rotating them in a direction defined by a rotational
15 travel path for multiple rotations such as to secure a flatware stack inside of the napkin stream.

4. The automated flatware and napkin assembling apparatus of Claim 3, wherein said label stream is further secured about the napkin stream and the
20 completed and secured bundle is ready for discharge through the exit slot.

5. A method for automatically wrapping flatware in a napkin, said method comprising the steps:

- a. providing a stack of spoons capable of being fed individually;
- b. providing a stack of forks capable of being fed individually;
- 5 c. providing a stack of knives capable of being fed individually;
- d. feeding individually a single spoon, fork and knife via a stepper motor down a feed chute into a stack is prior to wrapping;
- e. providing a roll of paper napkins and feeding a napkin stream fed from said rolled paper napkins by a series of first indexing rollers working in a pinch roller arrangement;
- 10 f. providing a label stream fed from the rolled paper adhesive labels by a series of second indexing rollers working in a pinch roller arrangement;
- g. directing said stack of flatware to the napkin stream;
- 15 h. wrapping said stack of flatware into a napkin and fastens the roll with a lable fed from said label stream.